APPENDIX F – COMMENTS ON THE DRAFT ENVIRONMENTAL ASSESSMENT AND RESPONSES TO COMMENTS



# Comment #1 (received via e-mail) From: Kenny Beagle

I do not believe you're company would let anyone build powerlines next to a school if there is a small amount of concern that this could cause any type of health issues you would be concern. Not that someones proffitt (BGMU or TVA) seems to be cut short. Both companys are backed by the federal government, maybe they are unaware what is going on. If CNN, Foxnews, or ABCnews got wind of this it would cause more of a concern. Anytime you put children in harms way it would make better sense to explore other options. I know this is about providing power, but WRECC have stated they can provide power without this substation & the powerlines. So this tells me that it is not a need, that it is a money maker, and now we are putting money over kids safety ??? Please tell me why? I do not want to cause a national news alarm I just would like my kids safety brought into concern, but if it is a national news headline so be it. We both know their are groups that would like to take this and run with it. Please respond back with this email.

Thank You Kenny Beagle

#### Response:

We assume that the comment is referring to the proximity of the proposed transmission line to the Anchored Christian School, a private school located at 1807 Cave Mill Road in Bowling Green. The North Mill substation is currently under construction by BGMU. The electrical equipment in the BGMU substation boundary would be located approximately 350 feet from the school building, and the substation would be surrounded by a fence. The proposed transmission line would approach the substation from the south and east (see Figure 2-1 in the final EA) and would be located approximately 412.5 feet from the school building at the closest point. The right-of-way for the proposed transmission line would be 75 feet wide, and it would run along the property line between the school property and the adjacent landowner, Developing Partners, LLC. However, the right-of-way and all structures would be located entirely on Developing Partners' property.

Single steel-pole structures like that shown in Figure 2-2 b in the EA would be used in the vicinity of the school. As stated on page 28 of the draft EA, the poles in this vicinity would also contain the BGMU distribution circuit below TVA's 161-kV circuit. Lattice-type towers would not be used. Structures would not be adjacent to any roads in the vicinity of the school. Such structures pose a minimal health risk. Some concerns have been raised about the potential effects to human health of electric and magnetic fields generated by transmission lines. The calculated exposure level from magnetic fields is 0.4 milligauss (mG) at 350 feet from the source. For purposes of comparison, a home hairdryer can generate 300 to 700 mG at 6 inches. However, because the strength of magnetic fields decreases dramatically as the distance from the source increases, a hairdryer produces about 1 to 70 mG at a distance of 1 foot. Likewise, fluorescent lights can produce 40 to 100 mG at 6 inches, but only 6 to 30 mG at 1 foot. Additional information about EMF can be found at the website: http://www.tva.gov/power/projects/500kv line/facts ems.htm

The Tennessee Valley Authority (TVA) is a federal agency. Bowling Green Municipal Utilities (BGMU) is a public agency and is not backed by the federal government.

The BGMU substation to be served by the TVA transmission line is needed to strengthen the BGMU transmission system, to provide system delivery point capacity, and to provide distribution substation and line capacity. This new transmission line would supply a third delivery point and distribution substation on the BGMU system that would satisfy all three needs. WRECC cannot provide for these needs without additional substations and lines with the environmental impacts associated with constructing these facilities. As explained in Chapter 1 of the EA, the substation is needed by 2014 by BGMU (not WRECC) to address capacity issues. However, the transmission line is needed sooner (summer of 2007) in order to improve electric power reliability in the Bowling Green area. The Tennessee Valley Authority generates electric power and supplies power to BGMU. BGMU has requested that TVA supply power to its new North Mill Substation.

An acknowledgement of the receipt of Mr. Beagle's comment was sent via e-mail.

Comment #2 (received via e-mail)
From: Ralph Maxson
1050 Cave Mill Road
Bowling Green KY 42104

Jim Williamson - the web site listed in the newspaper to obtain a copy of your draft study didn't work. Could you please Email me a copy, or mail me one at: Ralph Maxson, 1050 Cave Mill Road, Bowling Green, KY 42104. Thanks - RM

# Response:

The link to the online version of the document was sent to Mr. Maxson via e-mail.

Comment #3 (received via e-mail) From: Robin Zeigler, HP Planner

**Bowling Green-Warren County Historic Preservation Board** 

1141 State Street

Bowling Green, KY 42101

Dear Mr. Williamson

May I please receive a copy (digital or hard copy) of the historic/architectural survey that was done by Karpynec for the E BG-S Scottsville 161-KV Transmission Line Tap to North Mill Substation?

Thank you.

Robin

Robin Zeigler, HP Planner Bowling Green-Warren County Historic Preservation Board 1141 State Street Bowling Green, KY 42101 270-842-1953 270-842-1282 fax

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www.warrenpc.org/historicpreservationboard.htm

## Response:

A copy of the report, *Architectural and Historic Survey of the Proposed TVA North Mills* 161-kV Transmission Line Corridor, Warren County, Kentucky, was mailed to the Bowling Green-Warren County Historic Preservation Board.

Comment #4 (received via e-mail)

From: Sue Tierney

Managing Principal Analysis Group, Inc.

111 Huntington Ave, Tenth Floor

Boston, MA 02199

Dear Mr. Williamson:

Could you please send me a copy of the draft environmental assessment for TVA's proposed transmission line for the Bowling Green, Ky., area?

Many thanks.

Sue Tierney

Sue Tierney
Managing Principal
Analysis Group, Inc. -- Celebrating 25 Years!
111 Huntington Ave, Tenth Floor
Boston, MA 02199
617-425-8114 - Voice
617-425-8001 - Facsimile
stierney@analysisgroup.com

## Response:

A link to the online version of the draft document was sent to Dr. Tierney via e-mail.

Comment #5 (received via e-mail)
From: Karen Wilson
138 Bent Creek Drive
Bowling Green, KY 42103

Dear Mr. Williamson,

As a homeowner in the Bent Creek subdivision in Bowling Green, KY I am encouraged to hear that there might yet be a possibility that TVA is willing to listen to the earnest pleas of those of us who live in this section of the county and that TVA can and will find a route that does not require building the type of power lines that TVA intends to build over the residential sections of Warren County.

Needless to say, we all fear the adverse health factor of such powerful power lines. My husband is a cancer survivor and I know the consequences that radiation and chemotherapy can have on an individual. Even the remotest chance that he should have to endure that again because of power lines built in our neighborhood is unacceptable. I am sure that you have knowledge of how debilitating cancer can be and you would likely not want any of your relatives subjected to the kind of potential that TVA is apparently anxious to subject others to.

Further, the bottom land in Bent Creek and Chestnut Hill where the power lines will likely be placed floods every year and how your company could even access those lines in times of flooding is something none of us can understand. Does TVA intend to make the bottom land more substantial than it is at the present time? If so, how will our properties be affected? Certainly, this area is one of the few remaining ones uncontamined by technology in southern KY; to intrude on it seems a sacrilege against nature and man.

Other communities have come to realize the long term benefits of placing power lines underground. Shouldn't TVA be morally and ethically responsible to the environment and find ways to preserve it rather than damage it, not only with the potential danger of the power lines but with the destruction of the beauty of our community? Once that beauty has been destroyed, the quality of life in the entire community is diminished, not only for all who live in our neighborhoods, but those who travel the roads in our section of Warren County are to be negatively affected by what is lost.

We realize that TVA can brag that it has never lost a suit or ever been denied access to its chosen routes. Maybe it is time for TVA to become more concerned with the lives of those upon whom you intrude than your own financial gain. Twenty years from now those who determined this route may not work for TVA and, likely, the entire means of supplying electrical power will be very different, but the countryside will remain scarred forever and the chances of reclaiming it lost to a company that cared more for itself than for a community.

We ask only that your approach be humane - either find a route that does not include heavily settled residential areas or do whatever must be down to protect the people and the environment by putting those unsightly lines underground and out of sight. Thanks for you time and I urge that you objectively evaluate my arguments.

Karen Wilson

138 Bent Creek Drive Bowling Green, KY 42103 (270) 793-9296

## Response:

The site chosen by BGMU for its North Mill Substation is in a developing area in the southeast part of the city. This commercial and residential development is a major factor contributing to the need for the substation. TVA developed 10 potential routes consisting of 17 separate segments. Each of the 10 potential routes would affect residential areas to some extent. Please refer to Table 2-2 for a comparison of the route alternatives.

Given the array of information that is available concerning the health effects of EMF, TVA understands the nature of your concerns. Based on this information, TVA does not think that the proposed line poses a risk to public health. The health effects of electric and magnetic fields (EMF) have been studied for over 20 years. During this period of time, there have been no scientific or laboratory studies which have proven a cause-and-effect relationship between EMF and health hazards. Moreover, scientists have not found a mechanism by which such magnetic fields could interact with biological tissue. Exposures to EMF generated by the proposed line would be at very low levels.

As stated in Section 4.6 of the draft EA, placement of transmission line structures in the floodplain of Drakes Creek is not expected to increase flood elevations along Drakes Creek or change the flow carrying capacity of Drakes Creek. Periodic access to power line structures would be necessary for maintenance purposes. However, TVA does not foresee conducting maintenance during any flood conditions. TVA does not propose the placement of any fill material in the Drakes Creek floodplain.

Efforts by the electric power industry to locate transmission lines underground have met with mixed success. Lower voltage (220 volts to 13 kilovolts) lines, known as distribution lines, can be buried in the form of insulated cables. However, burying higher voltage (69 to 500 kilovolts) transmission lines is more difficult, as these lines require additional shielding to physically protect the line and insulate the voltage from ground. Depending on the voltage of the transmission line, trenches would have to be dug and the cables would be placed in special sealed conduits or in tunnels. Measures to dissipate excess heat and prevent flooding of the tunnel would also be necessary. Diagnosing problems in the line and locating the source of an interruption is much more difficult with underground power lines than with comparable overhead lines, and additional excavation is usually required. Thus, burying the proposed 161-kV line would require extensive excavation and consequent high costs for construction and maintenance. Although buried lines intrinsically have less adverse aesthetic impact over the long term than overhead lines, they are subject to additional maintenance and reliability problems, and construction of underground lines can be more environmentally damaging than overhead lines. For these reasons, TVA does not bury its transmission lines.

Comment #6 (received via e-mail)
From: Tim Kanaly
198 Bent Creek Ct.
Bowling Green, KY 42103

Mr. Williamson,

I am very much opposed to this project! I don't understand why you can't use existing routes that are available to you. The cheapest way for TVA isn't always the most environmental friendly way. We plan to fight this project every step of the way, because it just doesn't make sense.

Sincerely,
Tim Kanaly
198 Bent Creek Ct.
Bowling Green, Ky 42103
President
Bent Creek Farm Homeowners Association

## Response:

The preferred route does utilize about 3 miles of existing WRECC transmission line right-of-way. In order to deliver power to the new BGMU Substation on Cave Mill Road, the acquisition of some new right-of-way will be required. TVA is not aware of any route alternatives that would allow TVA to entirely utilize existing transmission line right-of-way to deliver power to the new substation with less overall impacts than the preferred route.

The reason for undertaking the proposed action is stated in Chapter 1 of the EA.

The segments composing the 10 route alternatives considered are shown in Figure 1-1. The selection process for the preferred transmission line route is discussed in Sections 2.3.3, 2.3.4, 2.3.5, and 2.4. A comparison of the alternative routes is provided in Table 2-2. TVA has utilized as much existing right-of-way, i.e., about 3 miles, as practical.

An acknowledgement of receipt of the comment was sent to Mr. Kanaly via e-mail.

# Comment #7 (received via e-mail) From: Joyce Ross

Dear Mr Williamson:

I am concerned with the TVA's proposal to build a power line through the flood Drake's Creek flood plain.

Between K and L, the poles will climb a Limestone wall which is heavily treed. Page 23 states slopes greater than 20 percent 'mean more potential for erosion and potential water quality impacts" In order to clear the "danger trees" from this area, you will be clearing the fragile banks of Drakes Creek and cause serious erosion. Herbicides used to keep the power lines clear will wash directly into the creek.

The report also states on page 33, regarding the Gray bat, Indiana bat or Yellow-crested **night**-heron 'none of the species were encountered during field investigations in April 2006. I was in this area with you when your staff was here in April. I encountered Surveyors and TVA police, but I did not encounter any biologists. Were your surveyors expecting to see bats in the middle of the day? As a resident of this neighborhood, I guarentee you there are bats and herons on Drakes Creek. A detailed srudy was done to assess the Habitat suitability for gray bats and Indiana bats at the proposed Sunset Bay Development by the TVA. Why wasn't a similar effort made on the Drake's Creek floodplain? Power lines are the **#1** killer of bats. Why was that left out of your report?

This area has been a safe haven for many animal species. Lets keep it that way.

Sincerely

Joyce Ross

#### Response:

As stated in the EA, the potential for erosion does generally increase with the steepness of the slope. In the case of the route between points K and L, as shown on Figure 2-1, some of the vegetation clearing would be done by hand to prevent erosion (see page 27). TVA would also take measures to prevent erosion on the line segment between points K and L. Category A Streamside Management Zone protection would be applied to the stream within this segment, and TVA would leave as much low-growing vegetation as possible in this area. Additional information about erosion control is provided in Appendices B, C, D, and E. Aerial application of herbicides is not allowed within a Streamside Management Zone, and the need for herbicides in this segment is unlikely. Should use of herbicides be necessary, herbicides labeled for use in Streamside Management Zones would be applied selectively by hand, as described in Appendix E of the EA. Additional information about herbicides used by TVA can be found in Appendix E.

As stated on page 27 of the draft EA, point J is located outside the vegetated zone along Drakes Creek; thus, no removal of large trees along the stream would be required. The only crossing of Drakes Creek would occur between points G and H (see Figure 2-1) along previously-cleared, existing WRECC right-of-way. A minimal amount of clearing of danger trees and soil disturbance would be required in this area.

Biological field work for this project was performed in April of 2006 by trained biologists. No yellow-crowned night herons were observed in the field. Field surveys by TVA biologists did not locate any heron colonies along the proposed transmission line corridor. Thus,

construction and operation of the power line is not expected to affect herons foraging in the vicinity.

To avoid potential impacts to Indiana and gray bats, TVA regularly routes corridors to avoid Indiana bat roost trees and caves, which are used by both species. The potential for impacts to these species is based largely upon proximity to roost sites. Although these species can forage along Drakes Creek along with more common bat species, no Indiana or gray bat roost sites are known to occur in the vicinity of the project. Special measures, discussed in Section 4.3, would be taken to reduce further the risks of potential impacts to these species. Impacts to potential bat foraging areas from construction of the corridor over Drakes Creek would be temporary and insignificant.

The Sunset Bay development is near a known Indiana bat winter roost. Therefore, appropriate constraints were applied to that development, as Indiana bats may roost in trees during summer months, especially in suitable trees near their winter roosts. Similar constraints would be applied here unless it is confirmed that no roost trees are present.

TVA is not aware of any circumstantial evidence or research findings that indicate that power lines are a major source of bat mortality. Rather, the major cause of declines in bat populations is human disturbance and loss of habitat, specifically disturbance of caves or other structures used by bats for roosting and hibernating.

Comment #8 (received via e-mail)
From: Charles B. Jones, Jr.
2683 Shanondale Dr.
Atlanta, GA 30305

Mr. Williamson:

RE: Bowling Green Municipal Utilities/TVA transmission line proposal

- 1) I support the proposed project and note no significant differences as to the options.
- 2) I would like to propose that TVA consider an option of decoying the transmission lines in a neutral brown color to mess with trees or even a camafloge as an experiment.
- 3) Similarly, consider an experiment, especially in the wetlands of placing commercially available birdnests/houses above ground to continue to draw species to and support wildlfe. The point of 2) and 3) is that wildlfe through commercialization will be increasingly squeezed into tighter areas. Rather than waiting for species to be threatened, encourage them in a manner through nests, etc. now to stabilize populations. It's low cost.

Thank you for the consideration to my comments.

Charles B. Jones, Jr. 2683 Sharondale Dr. Atlanta, GA 30305

## Response:

Much of the proposed right-of-way would cross open areas; other portions would be located in commercial areas that currently have existing poles, signs, and other vertical visual features. As stated in Section 4.10, the new structures in that portion of the route that would use existing right-of-way would be visually similar to those being replaced. Although the new steel poles would initially contrast more in the landscape than existing wood poles, they tend to become darker and duller as they age in the weather, and their visual contrast decreases.

Because nesting or roosting birds, especially larger birds, can cause problems with the transmission line conductors and insulators, TVA does not provide artificial nesting or roosting sites on structures.

Comment #9 (letter sent via UPS)
From: Alan Larsen
Houchens Industries
700 Church Street
Bowling Green, KY 42101

James Williamson Jr Senior NEPA Specialist WT 11D-K TVA 1101 Market Street Chattanooga TN 37402

Mr. Williamson,

This letter comes in response to your letter dated to me on October 25<sup>th</sup> 12006, and is in reference to the proposed transmission line in Bowling Green KY.

On August 25<sup>th</sup>, 2005 I opened an informal dialogue with Steve Pitt of Mesa and Associates concerning the proposed lines at a public hearing located in the TVA customer Service Center here in Bowling Green. At that time I expressed an interest in making other arrangements with regards to the proposed line. He agreed to take my comments under consideration, and I left satisfied that this was so.

On January 20<sup>th</sup>, 2006, we received a letter from TVA indicating the "preferred route" would affect us as property owners. At that point, I opened a formal and documented dialogue with Mr. Pitt, Mr. Roger Sparring, Mr. David Goins, and Mr. Mark Iverson.

During the course of these conversations, there have been contradictions amongst the individual parties with respect to the lines, their original proposed positions, and the need for multiple poles verses single poles at turns, the archeological sensitivity of the project, the financial verses ecological concerns, and the commitments from them to visit the property personally to review the positioning. At this point, there have been enough contradictions in statements to clearly indicate no one is really quite sure why we cannot get resolution to my core issue.

On page 18 and 19 of the EA, TVA clearly states that the desire of TVA to avoid "existing and potential residential and commercial development areas". The same paragraph goes on to state that "other important factors are engineering requirements, paralleling or utilizing existing utility corridors, following property lines, avoiding existing homes by a distance of at least 300 feet, and accommodating land owner requests about the line location if possible during the final stages of the project".

On Page 26 of that same report, TVA and BGMU collectively agree that "From point F, the route would continue in the same direction 2900 feet to point G, an angle to the left at point G on the east side of Roy Thomas Road. The land crossed in this area is open pastureland. There are nearby homes north and south of the route on the west side of Middle Bridge Road. There is one home **very near** and south of the route at point G". The home they reference is mine.

I have included the excerpts from your EA, and some other documents here for you to review. In short here is my request.

As it is TVA's published policy to "avoid existing homes by at least 300 feet", and to "accommodate land owner requests about the location of the lines if possible during the final stages", please relocate the line as laid out in the attached documents. At a point nearly midway between points 8 and 9 on the map, make a very gentle northwardly turn, ending at point 9 approximately 100 ft due north of the existing pole. At that point, make the proposed turn southeast to connect with the original plan midway between points 9 and 12.

- I have discussed this with professional engineers that indicate that this adjustment will have no bearing on the lines.
- I have had initial dialogue with the other landowners that would be affected, and
  since there would be no additional easement requirements, and the areas that the
  proposed line would be affecting are already being affected, and there is no
  expectation to develop either of those effected pieces of property, they are open to
  the adjustment.
- TVA clearly states that when possible, they would prefer to be at least 300 feet away from homes. This situation provides a unique opportunity to make a correction to what is currently not the case with regard to the distance from my home.
- · This provides for an environment that will protect the existing value of my home.
- This adjustment provides the opportunity to avoid a lengthy and protracted event in the legal system.

Please consider this as a viable alternative.

I can be reached at the following numbers.

Office 270-780-2848 Home 270-782-9035 Cell 270-535-9721

Alan Larsen

Regards

**Enclosures** 

C: Senator Mitch McConnell KY Steve Pitt MESA Roger Sparring TVA David Goins TVA Mark Iverson BGMU

#### Response:

In its process of identifying potential new transmission line routes, i.e., those areas where the acquisition of new right-of-way will be required, TVA uses several criteria and guidelines, including staying at least 300 feet from residences, if possible. With respect to the proposed TVA transmission line, TVA would use existing WRECC right-of-way from Point C to Point H as shown on Figure 2-1. WRECC owns rights to this right-of-way in the form of an easement agreement with the affected landowners. That easement provides WRECC the right to construct and operate its 69-kV line within the boundaries of the right-of-way.

TVA would replace the existing WRECC structures with new steel-pole structures. TVA would then place its new 161-kV transmission conductors (lines) on these structures and replace the 69-kV line on the new structures.

The commenter's property is already crossed by the existing WRECC right-of-way and the WRECC 69-kV line, and his residence is located immediately adjacent to the edge of the existing right-of-way. Moreover, this residence was constructed after the WRECC right-of-way was established. TVA's distance constraint would not apply in this situation and that constraint is only a general guide. The requested realignment is not considered to be practical in that it would require the acquisition of new right-of-way via an easement agreement between WRECC and/or TVA and the affected landowners as well as the installation of angle points (i.e., locations where the line changes direction). TVA also does not control the alignment of the WRECC right-of-way.

Comment #10 (received via letter)

From: C. J. Johanson

**Landmark Association** 

P.O. Box 1812

Bowling Green, KY 42102-1812



"A future with a past"

21 November 2006

Mr. Jim Williamson Tennessee Valley Authority 400 West Summit Hill Drive Knoxville, TN 37902-1401

Re: North Mills 161-KV Transmission Line Corridor, Warren County Kentucky

Dear Mr. Williamson:

The Landmark Association would like to request consulting party status for the North Mills TVA project. Landmark is a nonprofit, all volunteer, preservation organization covering Bowling Green and Warren County.

We respectfully request your consideration of follow the existing BGMU line to cross the creek rather than create a new crossing. Drakes Creek was a popular site for settlement by early white explorers, including Daniel Boone and was likely also favored by Native Americans so we are concerned about the disturbance of valuable archaeology and the detrimental aesthetics this project will cause to a valuable historic site.

Please also note that WA-1019 is a c.1890 tollhouse.

Sincerely,

CJ Johanson President

P.O. Box 1812 • Bowling Green, KY 42102-1812 • (270) 782-0037

# Response:

A letter detailing TVA's methodology and findings of potential effects to cultural resources was sent to the Landmark Association on December 4, 2006.

Initially, TVA considered a new crossing of Drakes Creek. However, the preferred route (see Figure 2-1) would use the existing WRECC crossing, i.e., the segment between points G and H. A new crossing is not proposed at this time. The proposed transmission line would utilize existing WRECC right-of-way, not BGMU right-of-way, from Point H to Point C near the tap point on the East Bowling Green-South Scottsville 161-kV Transmission Line.

Because the existing WRECC 69-kV line crossing of Drakes Creek would be used and because there would be minimal additional soil disturbance at the crossing site, no additional effects to archaeological or historic resources are expected in the vicinity of Drakes Creek.

TVA is aware that site WA-1019 is a tollhouse that was constructed about 1890. The text of the EA has been changed to reflect this information.

Comment #11 (via letter)
From: Robin Ziegler
Bowling Green & Warren County Historic Preservation Board
1141 State Street
Bowling Green, KY 42101



21 November 2006

Mr. Jim Williamson Tennessee Valley Authority 400 West Summit Hill Drive Knoxville, TN 37902-1401

Re: North Mills 161-KV Transmission Line Corridor, Warren County Kentucky

Dear Mr. Williamson:

As the preservation planner for the Bowling Green and Warren County Historic Preservation Board. (HPB) I am requesting consulting party status on the above project. The HPB is an all volunteer board appointed by the city and county. Our primary mission is "to preserve, protect, and maintain the architectural, cultural, and archaeological resources within the City of Bowling Green and Warren County, Kentucky."

Because the deadline for comments is November 27<sup>th</sup> I am providing my comments in this request for consulting party status letter.

I encourage you to more fully explore the area before making a decision. It appears that the report "Architectural and Historic Survey of the Proposed TVA North Mills 161-KV Transmission Line Corridor, Warren County, Kentucky" is inadequate. It does not include the entire area under consideration but only the preferred route. Please note that on page 20 there is a photo of resource WA-1018 but no description or assessment. The survey, in only one instance, takes into account supporting resources such as barns and a stone wall. There does not appear to have been basic historic research that would include deed searches and review of historic maps. For example, the 1877 Beers map reveals a mill at the location of "H" on map 2-1 of the "East Bowling Green-South Scottsville 161-KV Transmission Line Tap to North Mill Substation". The bibliography of the "Architectural and Historic Survey" report does not reference any of the basic publications that cover the history of our area such as Architecture of Warren County. Kentucky 1790-1940, Early Warren County Landmarks by Irene Moss Sumpter, Bowling Green and Warren County: A Bicentennial History by Nancy Disher Baird and Carol Crowe

1141 State Street Bowling Green, KY 42101

> 270-842-1953 FAX: 270-842-1282

robin.zeigler@bgky.org

www.warrenpc.org/ historicpreservationboard.htm





Carraco or articles held at the Kentucky Library & Museum about Drakes Creek.

I respectfully disagree with the assessment that WA-1019 is not eligible for the National Register. Because the structure is a c.1890 toll house, I argue that it is eligible for the National Register under criterion A.

The most significant historic resources in this area are likely along Drakes Creek which served as a popular settlement site for both Native Americans and early white settlers, including Daniel Boone and his brothers. For this reason, I recommend consideration of the southern line which would follow the existing BGMU-line across the creek rather than crossing the creek in a new location and disturbing valuable archaeological resources.

Thank you for this opportunity.

Sincerely

Robin Zeigler

Historic Preservation Planner





#### Response:

A letter detailing TVA's methodology and findings of potential effects to cultural resources was sent to the Bowling Green and Warren County Historic Preservation Board on December 4, 2006.

TRC, a contractor, conducted a Phase I Cultural Resources Survey of the proposed transmission line route and prepared the report entitled *Architectural and Historic Survey of the Proposed TVA North Mills 161-kV Transmission Line Corridor, Warren County, Kentucky.* The approach used in conducting architectural surveys for proposed TVA transmission lines complies with applicable requirements and has been accepted by the

Kentucky Heritage Council (KHC). The documentation provided in the TRC report meets the KHC *Specifications for Conducting Fieldwork and Preparing Cultural Resource Assessment Reports*.

An architectural description of WA-1018 is provided on page 19 of the TRC report. A National Register of Historic Places (NRHP) assessment of this site was performed and is also documented on page 19 of that report.

TVA, in consultation with the KHC, agreed with TRC's NRHP assessment of WA-1019, which found this property to be ineligible for the NRHP.

As stated in the response to Comment #10, the proposed transmission line would utilize the existing WRECC line crossing of Drakes Creek. The site of the crossing has been disturbed previously by construction of the bridge and construction of the existing WRECC line. Any additional site disturbance would be minor. Thus, no additional effects to archaeological or historic resources at the crossing site are expected.

Comment #12 (received via fax and via e-mail)
From: Ed Groves
325 Emmett Ave.
Bowling Green, KY 42101



325 Emmett Ave. | Bowling Green, KY | 42101 1el 270.781.2140 | fax 270.842.7140 wnky@nbc40.tv | www.nbc40.tv

11/27/06

Jim Williamson Senior NEPA Specialist TVA 400 W. Summit Hill Dr. (WT 11D) Knoxville, TN 37916-1499

Dear Mr. Williamson;

I'm writing you as a homeowner in Bent Creek Farms (135 Bent Creek Dr) in Bowling Green in response to your request for comments concerning the proposed TVA power line in Bowling Green that will cross property owned by our neighborhood.

Based upon the impact of this power line to our neighborhood and property owners both collectively and individually I remain foolishly optimistic that the issue can be resolved in a manner that doesn't harm me or my neighbors. I've read a portion of the report and vehemently disagree with the claim that property values are not impacted by having a power line in one's backyard, or neighborhood. I live in the front part of our community and as far away from the proposed line as I can be but don't kid yourself, when the power line causes the homeowners closest to it to lose value it certainly affects me as well. I'm sure you're aware of "comps" and their affect on selling/buying a home.

The sad part about all of this is the apparent lack of cooperation and common sense being applied. There is an alternate route available that utilizes existing power lines and crosses through an industrial area avoiding our residential area; I fail to understand why the line doesn't follow that route. Your own study sites the high expense of acquiring the right away in an expensive residential area.

I believe that it is in everyone's best interest to abandon the current plan for one that makes more sense. I'm familiar with the old saying that you can't fight city hall and your associates at TVA have made it very clear to us that it is even more futile to take on the TVA however I hope someone there will take into account our resolve and determination to undo this injustice. Ultimately we're aware the odds are against us but it will be prove to be a long and costly battle and sadly one that could be avoided.

I trust that this can be resolved. I'm familiar with the "not in my backyard" concept but there clearly is a difference here. I appreciate your co-operation.

Best wishes,

Ed Groves President & General Manager

#### Response:

Residential property value is primarily a function of two components-- intrinsic value of the residence and marketability. The intrinsic value is influenced by the quality of the construction, size, condition of the home, architectural detail, and the presence of amenities such as decks, floor coverings, pools, fireplaces, saunas, etc. The proposed transmission line would be approximately 1,800 feet from the residence at 135 Bent Creek Drive. The existing WRECC 69-kV line is also approximately 1,800 feet from the home. The presence of the proposed transmission line would not affect the intrinsic value of the subject home, as the basic quality and condition of the home would not be affected. Marketability of real estate is influenced by a variety of factors, many of which are subjective. Such factors include aesthetic appeal of the home, floor plan design, size of the home, landscaping, interior attractiveness, and character of the neighborhood. As stated in Section 4.12, the presence of a nearby transmission line can affect property value. Generally, potential effects on residential property values tend to be more pronounced when the transmission line is large (i.e., constructed with lattice type structures) and is very near the subject real estate, and the effect diminishes rapidly as this distance increases. Also, once a new transmission line becomes an accepted visual characteristic of the area (usually about 5 years), potential effects on property values virtually disappear.

TVA is not aware of any other route alternatives that would allow TVA to use existing transmission line right-of-way to deliver power to the new BGMU North Mill Substation that would have less overall impacts than the preferred route.

Comment #13 (received via letter)
From: David R. Broderick
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**VIA FACSIMILE TO: 865-632-6855** 

November 27, 2006

James F. Williamson, Jr. Tennessee Valley Authority 400 West Summit Hill Drive WT 11D Knoxville, TN 37902

RE: Draft Environmental Assessment

Dear Mr. Williamson:

I am writing on behalf of my clients, members of the Blue Springs Farm and Bent Creek subdivisions in Bowling Green, Kentucky, in addition to other individual landowners and residents located in and around the area of the proposed 161kV East Bowling Green-South Scottsville Transmission Line Project. This correspondence is meant to comment on the "Draft Environmental Assessment" published by TVA in October 2006. My clients very much appreciate the opportunity to submit written comments. Just so you are aware, some of my clients may also send their comments to you directly, which I have instructed them to do if they felt so compelled. I simply ask that you give due consideration to all of these comments in contemplation of the proposed transmission line project.

First and foremost, Section 1.7 of your assessment addresses federal permits and licenses. I do not see where the report addresses the permitting requirements, as I understand them, pursuant to the Clean Water Act of 1977. The proposed project will directly affect a nearby natural water source called Drakes Creek. It is my understanding that the Clean Water Act requires a National Pollutant Discharge Elimination System (NPDES) permit for construction activities such as what TVA has proposed here, especially where it involves removal of trees or bedrock or the leveling, grading and filling of land.

It is my understanding that this permitting requires submission of studies, including but not limited to soil samples and other specifics regarding the water source and its location and extent. Furthermore, your report does not contain TVA's proposed Storm Water Pollution Prevention Plan (SWPPP). The SWPPP requires a detailed site plan considering, among other things, 1) disturbance of the smallest area possible and 2) disturbance of sensitive areas such as steep and unstable slopes and areas susceptible to erosion.

James T. Williamson, Jr. November 27, 2006 Page 2 of 3

The SWPPP must also include a comprehensive Pollution Prevention Site Map containing information such as 1) location of surface waters; 2) location and steepness of slopes after grading; 3) location of areas of soil disturbing activities or the total area of the site where soil will be disturbed; and 4) drainage patterns of the site after completion and the points where stormwater will discharge, using topographic contour lines or arrows to indicate the direction of runoff flow. The report does not seem to address these matters, nor are they addressed in Sections 4.4 and 4.5 concerning surface and groundwater, respectively.

Specifically, my clients would like TVA to address these permitting matters with more particularity, including a timeline as to when TVA expects to apply for and receive the applicable permits, as well as TVA's cost analysis as it relates to the procurement of all federal and state permits. My clients would also request a copy of any Notice of Intent and supporting documents that may be or have been filed in applying for said permits.

Of course, your report states that TVA will follow and administer Best Management Practices (BMPs) required by federal law. However, we feel those BMPs should be laid out with more specificity as to precisely what the practices are and how TVA intends to administer, inspect and control them both during and after construction. It is also a requirement that all BMPs be specifically shown on the project map, which they are not in this case. For these reasons, my clients have serious concerns and request more detailed information.

Other concerns brought forward by my clients that do not seem to be addressed adequately in your report are such things as the level of study to be performed in terms of geology of this area. While your report recognizes the rare karst topography in the area of the proposed project, it makes no mention of whether any borehole exploration or geophysical tests will be conducted in order to prevent such things as sinkhole collapse. For one, these types of analyses can be rather expensive, which his why my clients feel they should be addressed to some end.

Despite your report, there are still concerns regarding erosion on the steep valley walls and storm water runoff due to removal of vital vegetation. What is more, the report fails to address the potential adverse health effects of the project and its proximity to neighborhood children and a local elementary school which have, in the past, been used to prohibit chosen transmission line routes in other states.

It is clear from the breadth of information addressed in your environmental assessment that this project will certainly affect the local environment and require painstaking efforts to assure that there are no negative outcomes. As it has been all along, it is our position that most of these concerns are nonexistent under other available alternatives for the transmission line. Conveniently for TVA, the study does not compare environmental impacts as they relate to the chosen route versus other proposed routes. I submit to you that those studies would be very interesting.

James T. Williamson, Jr. November 27, 2006 Page 3 of 3

Once again, all of my clients urge TVA to reconsider the proposed route in this matter. Your very own study suggests that the additional power supplied by the project will not become necessary until at least 2014. In other words, there remains sufficient opportunities and time to reconsider the alternatives.

I welcome discussion at any time and any place regarding my clients concerns. Please feel free to contact me.

Verx opurs

BRODERICK & ASSOCIATES

David F Broderick

#### Response:

Typically, TVA does not obtain the necessary permits for projects until the appropriate level of environmental review and documentation is complete in accordance with the National Environmental Policy Act (NEPA). This is in keeping with the direction that NEPA reviews be conducted at the earliest possible time. The schedule for the proposed transmission line project calls for TVA to submit a stormwater permit application to the Commonwealth of Kentucky in March, 2007. TVA will supply the information submitted. Additional information pertaining to stormwater permitting for construction sites in Kentucky can be found at the following website: <a href="http://www.water.ky.gov/permitting/wastewaterpermitting/KPDES/storm/">http://www.water.ky.gov/permitting/wastewaterpermitting/KPDES/storm/</a>. In addition, TVA will obtain a permit from the City of Bowling Green because the city qualifies under the National Pollutant Discharge Elimination System (NPDES) Phase 2 rules for Municipal Separate Storm Sewer System (MS4). Additional information is available at <a href="http://www.bgky.org/publicworks/planningdesign/swenv2.php">http://www.bgky.org/publicworks/planningdesign/swenv2.php</a>.

As described in the above website, one of the requirements of the general Kentucky Pollutant Discharge Elimination System permit is the preparation and implementation of a SWPPP prior to the start of construction. This plan, which would be available for review by the Commonwealth of Kentucky upon site inspection, will include maps showing the location of environmentally sensitive areas such as Streamside Management Zones along with the planned erosion and sediment control measures. This EA, however, already describes these areas. BMPs will be installed where needed consistent with the guidelines outlined in Appendices B, C, and D.

Transmission line construction techniques are described in Section 2.2.1 of the EA. Over most of the route, single steel-pole structures like those shown in Figure 2-2 would be used. Taller, double pole structures, as shown in Figure 2-3, would be used at road and creek crossing to provide adequate clearance. At those places where the line changes course, i.e., angle points, guy wires may be necessary to provide stability. Reinforced concrete

foundations may be required for angle point poles at which guy wires cannot be used or for special structures (such as some switch poles and unguyed dead-end poles). In these cases, TVA may use soil borings to determine the geologic properties for its foundation design. As stated in Section 2.2.1, most poles would be imbedded directly in holes augured into the ground to a depth equal to 10 percent of the pole's length plus an additional 2 feet. Thus, most structures, which are 80 to 100 feet tall, would require holes 10 to 12 feet deep. Taller structures (100 to 120 feet tall) would require 12 to 14 foot deep holes. The onground siting of line structures is sufficiently flexible that problem locations typically can be avoided. Such structures are located on sites capable of supporting such a structure. Unsuitable locations, such as sinkholes, are avoided as structure locations. TVA has extensive experience in constructing transmission lines in karst areas and has not found sinkhole collapse from the installation of transmission structures to be a problem.

Approximately half of the proposed route would use existing right-of-way. Along this portion of the route, additional vegetation clearing would be minimal, as the right-of-way would not be widened. Thus, the potential for erosion on the existing right-of-way is minimal. Minor clearing would be required on the proposed route within the floodplain of Drakes Creek. Because this area is relatively flat, erosion potential along this portion of the route would be minimal. Removal of woody vegetation would be necessary on the bluff located between Points K and L as shown on Figure 2-1. We assume that this bluff is the area the commenter refers to as "steep valley walls." A strip approximately 400 feet long and 75 feet wide would be cleared of woody vegetation. Also, any "danger trees," located adjacent to the right-of-way would be felled. Stumps, roots and low-growing vegetation would not be removed. The terrain within this strip is steep and rocky. In this particular location, hand clearing would be used, and a portion of the strip at the base of the bluff is located in Streamside Management Zone. Because soil disturbance would be minor, the potential for erosion is low. Measures routinely taken by TVA during transmission line construction to prevent or minimize erosion are presented in Appendices B. C. and D. Appendix E contains the procedures used by TVA to protect environmental amenities during right-ofway maintenance.

The issue of potential health effects of the proposed transmission line to children at the Anchored Christian School is addressed in the response to Comment #1. As stated in the EA, at its closest point, the proposed transmission line would be located about 675 feet from the Cumberland Trace Elementary School building and approximately 325 feet from the school property line. Much of the line would be obscured by trees to the southeast of the school. Because of the distance and intervening property ownership, the proposed line is not expected to pose a health risk to children at the Cumberland Trace Elementary School.

TVA understands your clients' concerns. TVA considers the preferred route economical and practical, and it poses less potential environmental effects than other options. TVA could choose a different route and make the commenter's clients happier, but this would be at the expense of other landowners.

The process used by TVA to develop feasible potential transmission line route options is described in Section 2.3, and it considers environmental and other effects of all of the identified feasible transmission line routes. If the commenter has other transmission line routes in mind, he has failed to identify them. An early part of TVA's process is the development of a "constraint map" as shown as Figure 1-1. This map is used to identify the locations of constraints such as wetlands, Interstate 65, Highway 231, streams, residences,

commercial and industrial areas, churches, and cemeteries. Based on the constraint map, along with consideration for other sensitive areas (e.g., known archaeological or historical resources), a total of 17 route segments was identified. These route segments were presented to the public at the public meetings. From the 17 segments, 10 potential routes were developed (see Table 2-1). A comparison of these 10 routes is provided in Section 2.3.5. Route Alternative 2 was adjusted slightly to utilize the existing crossing of Drakes Creek. TVA evaluated each route alternative before selecting a preferred route.

The additional line capacity is needed as early as 2007 to help respond to emergency situations.

Comment #14 (received via letter) From: David R. Broderick

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November 27, 2006

James F. Williamson, Jr.
Tennessee Valley Authority
400 West Summit Hill Drive WT 11D
Knoxville, TN 37902

RE: Draft Environmental Assessment

Dear Mr. Williamson:

I am writing on behalf of my clients, Glendale Baptist Church and Anchored Christian School, in Bowling Green, Kentucky. My clients operations are located along Cave Mill Road in Bowling Green, Warren County, Kentucky. My clients properties are immediately continuous to the proposed 161 kV transmission line, leading up to the tie-in with the yet to be constructed Bowling Green Municipal Utilities substation.

This correspondence is meant to comment on the "Draft Environmental Assessment" published by TVA in October 2006. My clients very much appreciate the opportunity to submit written comments. I ask that you give these comments your due consideration contemplation of the ultimate decision on whether to adopt the proposed "preferred" route for the project.

Our chief concerns relate to a very significant environmental issue your report fails to address altogether, that is the impact of the proposed transmission line on the children who attend Anchored Christian School each and every day, not to mention those children and members of Glendale Christian Church.

I am sure TVA is well aware of the hundreds of studies conducted on the health effects of transmission lines and electromagnetic fields (EMFs). In 2002, the state of California spent \$7 million on a study to determine whether there is a link between EMFs and diseases such as cancer. Based on this study, scientists found that the evidence suggested a "causal connection" between EMFs from power lines and childhood cancer and other cancers.

James F. Williamson, Jr. November 27, 2006 Page 2 of 2

Interpreted another way, this report found that EMFs from power lines *likely cause* childhood and adult leukemia, adult brain cancer, spontaneous abortions and ALS. It said they *possibly cause* childhood brain cancer, female and male breast cancer, Alzheimer's, suicide and heart disease.

Additionally, in 1987 the Texas Court of Appeals, in a case styled *Houston Lighting & Power Company v. Klein Independent School District*, noted the existence of scientific evidence suggesting that transmission lines posed health risks to children. At issue before the Court were scientific concerns, just like my clients have in this instance, of possible health effects and risks associated with exposure to high voltage power lines and EMFs. The Court ultimately ordered the power company to choose another location for its power lines because the power company abused its discretion in choosing a route to erect its power line in reckless disregard for the landowner's (school's) use of their property.

Aside from the EMF health-related issue is that of the safety of the adjacent school children. My clients feel your environmental assessments does not adequately address issues such as what measures will be taken to assure the school children cannot come into contact with these structures that are 80 and 100 feet tall. Other questions unanswered include: Does TVA intent to construct some barrier? Would not these structures invite the curiosity of children?

My clients feel that, at the very least, this adverse environmental effect on our most valuable resource – children - deserves much consideration and analysis in your study, and respectfully requests that you address the same.

I welcome any discussion regarding my clients concerns. Please feel free to contact me.

Hery thuly yours,

BRODERICK & ASSOCIATES

David F Broderick

# Response:

The matter of exposure of children at the Anchored Christian School to magnetic fields is discussed previously in the response to Comment #1. Also see Section 4.13 of the EA.

TVA is aware that extensive research has been performed in an attempt to determine the connection between exposure to electric and magnetic fields (EMFs) and various diseases. Although some epidemiological studies suggest a relationship between EMF exposure and certain diseases, laboratory studies have not been able to establish definitive mechanisms. According to the *Executive Summary of the California EMF Risk Evaluation for Policymakers and the Public*, the 2002 California report cited is based on the opinions of 3 scientists employed by the California Department of Health Services. These researchers reviewed literature and research results and then expressed their beliefs on a 0 to 100 scale as to degree of their personal certainty in some amount of personal risk as a result of

exposure to EMF. Exposures considered were from multiple sources, including transmission lines, in-home exposures from appliances and wiring, and high exposures from occupational sources. The 3 scientists were more inclined to believe that EMF exposure increased health risks than other panels convened previously by the National Institutes of Environmental Health Sciences Working Group, the International Agency for Research on Cancer, and the British National Radiological Protection Board. The California report was not a research study, and it neither established nor determined any cause-and-effect relationships between EMF exposure and the subject diseases or medical conditions.

As stated in the response to Comment #1, the right-of-way for the proposed transmission line would be located on property owned by Developing Partners, LLC. As finally adjusted, no part of the right-of-way would be located on the Anchored Christian School property. The structures would be located approximately 38 feet from the Christian Anchored School property line, and their design is not conducive to climbing without special equipment. All structures are grounded, and physical contact with a structure does not present a danger. TVA does not plan on constructing barriers around structures.